

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/602,206	06/23/2003	Hitotoshi Murase	5095-4064	2222	
	7590 02/08/2007 INNEGAN, L.L.P.		EXAMINER		
3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			MCAVOY, ELLEN M		
			ART UNIT	PAPER NUMBER	
			1764		
SHORTENED STATUTOR	Y PERIOD OF RESPONSE	MAIL DATE	DELIVER	DELIVERY MODE	
3 MONTHS		02/08/2007	PAI	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)					
		~					
Office Action Summan	10/602,206	MURASE ET AL.					
Office Action Summary	Examiner	Art Unit					
- A111	Ellen M. McAvoy	1764					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING D/ Extensions of time may be available under the provisions of 37 CFR 1.1: after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period v Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim will apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).					
Status							
1)⊠ Responsive to communication(s) filed on 17 N	ovember 2006.						
3) Since this application is in condition for allowar	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is						
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.							
Disposition of Claims							
4)⊠ Claim(s) <u>1-17 and 19-23</u> is/are pending in the application.							
4a) Of the above claim(s) is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.							
6)⊠ Claim(s) <u>1-17 and 19-23</u> is/are rejected.							
7) Claim(s) is/are objected to.							
8) Claim(s) are subject to restriction and/o	r election requirement.						
Application Papers							
9) The specification is objected to by the Examine	er.						
10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.							
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).							
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.							
Priority under 35 U.S.C. § 119							
12) Acknowledgment is made of a claim for foreign	priority under 35 U.S.C. § 119(a))-(d) or (f).					
a) ☐ All b) ☐ Some * c) ☐ None of:							
1. Certified copies of the priority documents have been received.							
2. Certified copies of the priority documents have been received in Application No							
3. Copies of the certified copies of the priority documents have been received in this National Stage							
application from the International Bureau (PCT Rule 17.2(a)).							
* See the attached detailed Office action for a list of the certified copies not received.							
Attachment(a)							
Attachment(s) 1) Notice of References Cited (PTO-892)	4) Interview Summary	(PTO-413)					
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Da	ate					
Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	5) Notice of Informat F 6) Other:	Patent Application					

Application/Control Number: 10/602,206

Art Unit: 1764

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-17 and 19-23 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiura et al (6,378,415) in combination with either Goda et al (6,506,868) or Goda et al (6,525,160).

Applicants' arguments filed 17 November 2006 have been fully considered but they are not persuasive. As previously set forth, Sugiura et al ["Sugiura"] discloses improving the durability of a coating layer formed on the sliding surfaces between two members such as the shoes and the swash plate in a compressor. The coating layer comprises a resin material containing metallic particles being formed on at least one of the sliding surfaces. Examples of suitable resin materials include epoxy resins, phenolic resins, furan resins, polyamideimide resins, fluororesins such as PTFE and other resins. Mixtures of resins may also be used. See column 4, lines 2-9. Examples of metallic particles include solid lubricants such as molybdenum disulfide and graphite. See column 3, lines 49-57. The sliding component of the claims, which may be used as the swash plate in a compressor, differs by including a silane-modified resin in the coating layer. However, such silane-modified resins are known in the art as evidenced by the Goda et al ["Goda"] references as effective in coating compositions.

Art Unit: 1764

The Goda references disclose silane-modified epoxy resins, silane-modified polyimide resins, silane-modified polyamideimide resins and silane-modified phenol resins which may be used in various applications. Goda teaches that the silane-modified resins have greatly improved heat resistance, mechanical strength, and the like, and also have the conflicting properties of satisfying flexability and high elongation rate at the same time. Goda teaches that the silane-modified resins may contain various additives such as solvents, fillers, mold releasing agents, stabilizers, and the like, and may be used for various applications such as sealing materials, laminates, heat-resistant coating compositions, heat-resistant adhesives, and as coatings for electric and electronic materials and the like. Having the prior art references before the inventors at the time the invention was made it would have been obvious to the skilled artisan to have followed the teachings of the prior art and to have used the silane-modified resins of Goda in the coating compositions of Sugiura to produce a coating having improved heat resistance, mechanical strength and satisfying flexability.

Applicants argue that:

"...the Office Action has not pointed to any proper motivation to combine Sugiura with either of the Goda references. The Office Action states that 'it would have been obvious to one skilled in the art to use the silane-modified resins of Goda in the coating compositions of Sugiara.' Applicant respectfully submits that, in general, a coating for the sliding surface of a compressor cannot be used for coating the sliding surface of a compressor until it has all the characteristics of seizure prevention, abrasion resistance and adhesion to a base member. The cited Goda references do not disclose that silane-modified epoxy resin has abrasion resistance and adhesion. Accordingly, there is nothing that would lead one one skilled in the art to look from Sugiara to either of the Goda references or that the combination would even work."

Art Unit: 1764

This is not deemed to be persuasive because the Goda references broadly teach that the alkoxy-containing silane-modified epoxy resins of the invention can be used for various applications without any restriction. See column 6, lines 42-44, of Goda ('160). The prior art also teaches that when using the silane-modified epoxy resins for various applications, other epoxy resins may be used in combination depending upon the application. See column 6, lines 48-50. As previously set forth, the silane-modified epoxy resin compositions of Goda may be used as coating compositions. It has been held that it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, here as coating compositions for metal substrates, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). Thus the examiner maintains the position that it would have been obvious to the skilled artisan to have used the silane-modified epoxy resins set forth by Goda in the coating compositions taught by Sugiara.

THIS ACTION IS MADE FINAL. Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Art Unit: 1764

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ellen M McAvoy Primary Examiner

Art Unit 1764

EMcAvoy January 28, 2007